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CAEN-STONE DREAMS;

OR,

THE HARMONY BETWEEN INDIVIDUAL AND NATIONAL INTERESTS.

BY

DAVID P. HOLTON, M.D.

NEW YORK:
DE WITT & DAVENPORT, PUBLISHERS, 160 & 162 NASSAU ST.
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ENTERED, according to Act of Congress, in the year 1855, by
DAVID P. HOLTON, M.D.
in the Clerk's Office of the District Court for the Southern District of New York.

CAEN-STONE DREAMS.

TWELFTH NIGHT.

THE ROPES.

Tossed upon the Atlantic wave, under storms, opposing winds, squalls and gales, on my first voyage of forty days; sea-sick, with retching and vomiting, I found no relief except in sleep.

Then visions of my country's greatness and power constantly returned, illustrating always one central thought—*the harmony between individual and national interests.* Each returning view, starting from a similar point, offered the same result; though in relation with divers employments, located in various parts of the Union.

In fact, this serial and daily addition of hopeful views of the future of humanity, caused an oblivion of all past troubles, and very much diverted the mind from the present. My own personal safety seemed not essential, in view of the certainty of the realization by my country of those bright visions. As writing increased my sickness, I repeated each morning to my son, a lad of eleven years of age, the substance of these dreams, that his notes of the same might possibly serve the future. For it could not fail to occur to me, that if these views should be presented to any class of readers, in some faint proportion to the sublimity of the original impression, much happiness would be

conferred on the recipients, and through their sympathies to others.

Safely arrived on terra firma, I have traced them with the best lineaments I find in words, which poorly represent the happy harmony of the original pictures.

Of these forty, the twelfth is now offered, though, alone, it may not present the reason for attaching to these dreams the appellation—*Caen-Stone.*

During the night of the 28th of November, the gale still increasing, with heavy cross seas, the orders of the captain and wate were hurried, the rapid movements of the crew, in close-reefing the sails, and in arranging the ropes, and other parts, were heard amidst rain and hail.

Confined to our cabin, we slept not till near morning, when the body found repose, and the mind was soon happy in perceiving some of the harmonies signified by the series of systems of living circles, composing a robe without seams and without border; through the folds of which could be read:

> " *That which is law is from God,*
> *Conformity to which constitutes a*
> NATION'S STRENGTH."

Much time passed in contemplating the universal application of this precept to all circumstances and relations, physical, intellectual, and moral.

Then I perceived this *robe* to be that, which aforetime had appeared in the *Church* of *Caen-Stone*, as a cloud, composed of circles within circles, and various systems of circles intimately mingling; series within series, constituting a unity.

The scene changed. I was passing down the Sixth Avenue, in New York, when my attention was arrested by the sudden appearance of five flags, on each of which were legibly printed these words: THE ROPES.

One of these flags was suspended over the centre of the Avenue, and on each sidewalk two flags, at about thirty feet asunder.

This strange appearance brought all passengers to a halt.

Various were the surmisings regarding the phenomenon. Some supposed these words were meant to be a caution to all beholders to beware the temptations from the outward world, through each and every of the five senses—a caution for all to avoid the first step in the way of transgression. Some thought them to be symbols foreshowing the union of the good of the five races, to break every unrighteous bond, and to put down oppression wherever exercised upon any of the human species. And others supposed them to be signals of danger, threatening any who should pass that way. With several who turned aside, in their haste to reach their places of business, or their appointments down town, I joined in the discussion of the enigmatic flags. Conversation turned upon *capital punishment*, other and more efficient means of prevention of crime, and the discipline demanded in the light of Christianity.

Reaching the busy wharves, I found myself in the centre of a group of carmen and men-along-shore, with their wives and their little ones, forming two parties, about commencing the journey to their new homes in the West; the one to the productive, well-watered table lands, open prairies, and fertile bottoms of the Minnesota; the other to rich valleys of the Des Moines.

The Minnesotians and Iowians having secured a good supply of carpenters' tools, implements of farming, house-keeping utensils, Bibles, and other school books, wearing apparel, &c.,—each party, upon their own boat specially chartered for transport to Albany, are about bidding adieu to New York, where for years they have struggled under all the embarrassment of poverty, irregular occupation, uncertainty of employment, high rents, and the temptations of a crowded city. They are about changing their precarious mode of a sickly existence for one of happy independence, in the healthy tillage of the beautiful soil.

At Albany, their goods and chattels are placed on canal boats for Buffalo. By the judicious arrangements of an agent sent in advance, the two parties are enabled to visit, for a few days, the State Geological Rooms, and attend six practical lectures by the State Geologist, and furnished with sundry printed volumes,

specimens, and seeds, they leave by railroad for Niagara Falls with accelerated hopes.

Having here enjoyed views which should be considered the birth-right of every American, they are met by a delegation of farmers from Lewiston, inviting all to turn aside to engage in the practical labors of the farm and dairy, a week or ten days, for the mutual benefit of all parties. During the evenings, the Niagara County Agricultural Society furnished practical lectures on agriculture; at the end of which period, their goods and chattels, having arrived at Buffalo, are transferred to steamboats, chartered for Milwaukie and Chicago, suitable to receive also the parties, who, going up the Lakes by Detroit and Macinaw, would occupy a week in the voyage; while one of their number, leaving Niagara at the suspension bridge, and going by the Great Western Canada Railroad to Detroit, thence to Grand Haven, and crossing Lake Michigan to Milwaukie, has but to announce the expected arrival to her citizens, quick to appreciate the dictates of duty and interest, and ample arrangements are seen completed for the reception of the Minnesota and Iowa-bound voyagers.

In my dream, I immediately saw, as it were, the closing exercises of a vast assemblage on the northern plateau of the city, under the direction of the Milwaukie Agricultural Society, whose President was distributing their valuable publications; also, chests of seeds, and models of newly-invented and well-tested implements of husbandry. Soon my attention was arrested by the music and waving banners of groups of children at a distance, marching towards the building occupied on this occasion, known as the "Pavilion Dépôt;" when I joined a party of the voyagers to whom was shown this unique structure. I found it to be a circular, fire-proof building, occupying five or six acres, including the central open court, and serving as a market, a dépôt for the Mercantile and City Railroad, and for sundry other purposes, as appears in the sequel. It was surrounded by a street with wide side-walks, planted with four rows of trees, selected with reference to the greatest possible variety, symmetrically arranged with due regard to their rela-

tive powers of development in growth. The main building was three stories high, having in its circuit many doors and windows of ordinary size; but the four grand arched portals, regarding the cardinal points, were of majestic proportions, pierced with sub-arches for the entrance and exit of rail cars or carriages: the northern appropriated to branches of the Green Bay, Manitowae and Lake Shore, the La Crosse, Fondulac and Watertown Railroads; the western for the *Mercantile and City* Railroad, constructed for purposes first conceived and based upon a system first adopted at Milwaukie. The eastern and southern grand portals were for the entrance and exit of carriages and omnibuses. The southern was also pierced with side arches; the one for foot-passengers, the other for the railroad encircling the southern part of this plateau, known as "Bluff Plateau."

The arcs of the main building, joining these grand portals, were bisected by four pavilions, six stories high, on square bases, of which one side exceeded the breadth of the circular structure, and jetting equally within and without.

These pavilions were from the centre severally in the direction midway between the cardinal points.

The main building and the pavilions were covered with promenade roofs, well protected by balustrades; and steam power, generated in a small building near the northern grand portal, served to elevate or lower provisions, goods, apparatus, persons, and weights of all kinds for the markets, dépôt and pavilions, and the furnace of the propelling engine warmed all the buildings.

In the northwestern pavilion was the Post-office, occupying the first floor and galleries in the second, both being connected by an open central portion. On the third, fourth and fifth stories were the offices of the eastern, southern, western and northern telegraphic companies. On the sixth floor were schools for the study of the forms and statutes of Wisconsin, and for book-keeping. These schools were free, designed chiefly for adults and the more advanced youth of the common schools of the State.

In the southwest pavilion the first and second stories were

united in one room surrounded with galleries, for the Merchants' Exchange, and on the third floor were the Mechanics' and Farmers' Exchange. On the fourth were the rooms of the Agricultural and Horticultural Societies. On the fifth were the chemical laboratory and rooms for study and analysis, chiefly with reference to the arts and trades. On the sixth were the photographic establishments and rooms for experiments on light and heat as connected with the development and growth of vegetable and animal bodies. In the northeast pavilion, on the first floor, was a large public reading-room, open from 6 in the morning to 10 in the evening at all seasons. Above was the City Library, the Cabinets of Mineralogy, Geology, and Botany. On the third floor were the officers of the various charitable associations and the rooms of the Exchange Lyceum, reciprocating in products of nature and art with individuals and with corresponding societies in all the States of the Union, and in remote parts of the earth. In connection with the rooms of the Exchange Lyceum was a greenhouse, jetting southeast upon the promenade roof of the main building, upon which, even to the observatory pavilion, was beautifully displayed, during the warm months, indigenous and exotic plants. This department was under the direction of the horticultural society, which, co-operating with the Lyceum, effected exchanges. On the fourth floor was the School of Design, sustained by a fund created by the liberal donation of ———, formerly residents of New England, free to all, under the instruction of celebrated Professors of Drawing, Painting and Sculpture.

This school had become the resort of young artists from all sections of the Union. The fifth and sixth story were united to form elevated galleries, with sky-light, for paintings, statuary, and other specimens of the beaux arts.

The pavilion of the southeast was remarkable for the beauty of its proportions, and the character of solidity it at the same time possessed. On the first floor were the central offices of the fire wardens, and of the police telegraphs, establishing instantaneous communication with all the watch-towers, all the

police stations, and other departments of the city government. Here were, also, dormitories for a number of firemen and policemen, in reserve for emergencies.

The second and third stories united, made a large room for public lectures, for the public meetings of the associations and societies located in the other pavilions, and in the other parts of the city, and for the exhibitions of the horticultural society. Here the annual course of lectures on Astronomy attracted auditors from a great distance. On the fourth story was a select library of mathematical, philosophical, geographical, and astronomical works.

Here was a bureau of longitudes and triangulations, co-operating with similar bureaux in other cities, greatly aided by the net-work of telegraphs throughout the land. Here, also, was a school for navigation and civil engineering, sustained by the legislature of Wisconsin, and free to pupils from every state and nation. These subjects were seen to be of increasing importance, not only from the rising interests in the direction of the Pacific, but from the relation the Great West holds to European ports, since the ship canal at Niagara Falls, and other improvements in lake and river navigation, enable the merchants of Milwaukie to make shipments direct to the eastern coasts of the Atlantic.

Here were rooms for the professors, assistants, and students of the Observatory. The fifth and sixth stories were specially devoted to the purposes of the Observatory, and private study in the grand problems relating thereto.

On the roof, at the four corners, were turrets opening downward to the observatory rooms, and crowned with rotary cupolas, by means of which the astronomers might safely direct their instruments to any part of the heavens, without inconvenience from the weather. On the roof were several pluviameters, for ascertaining the quantity of rain, and two anemometers, which indicated the direction of the wind upon duplicate dials; one pair of which was in the observatory room, and the other in the lecture room below.

Above this pavilion rose a tower, ascended by winding stairs

within, having platforms at three several heights, with exterior balustraded promenades. Next above was a circular apartment, presenting on the northern, western, and southern faces dials, marking by day the hour to the citizens, and on the other side was placed an oxy-hydrogen light, whose luminous rays were directed or reflected eastward, to guide the mariners by night, without interfering with the astronomical observations.

This was crowned with a dome, in manner and for purposes similar to those on the turrets described, and under the direction of a principal, with assistants, one of whom (by reason of the advantages of this position) was charged with the special and constant duty of city watch, who, by a speaking-tube, and also by telegraphic wires, was in easy communication with the fire and police departments on the first floor, and through them with all the city.

In the open court, enclosed by the buildings, were several circular rail-tracks, and space for carriages, the portion to the southeast for the reception and delivery of passengers being protected by a glass roof.

In the centre of the court was an iron structure of massive proportions, chiefly occupied by gigantic machinery, obedient to steam power, generated in the small building near the northern grand portal.

This structure had been erected over an oval well-hole of 160 feet in the long, and 80 feet in the short diameter.

While admiring the gearing, the harmony, and strength of this machinery, and being about to inquire into the purposes of this intra-terrene passage, and the new features of this Mercantile and City Railroad (which, it was said, had been recently adopted in New York), there was heard the music of approaching youth, the inmates of the Milwaukie Orphan Asylum accompanying the children of the Minnesota and Iowa-bound voyagers, waving their temperance banners, and singing the virtues of the cold-water bath. They entered several cars, which were soon being let down the great pit. My curiosity was intense. Could it be they were seeking baths in that direction? Or could it be a geological excursion—a veritable

test of vaunted theories? In statuary and paintings, the great Cuvier is represented as engaged in the study of the earth's structure, standing by the side of a globe, deeply cleft, exposing geological strata and fossils; but while the French are distinguished for learned theories, the Americans offer demonstrations, full development, and practice. Or might not this novel route be the work of abolitionists, conducting the refugee to cities of refuge? Or again, could this intra-terrene passage have political bearings? Since Congress prosecutes so slowly the great California and Oregon Railroads, and the line of steam-packets on the Pacific to the rich markets of the East, might not this strange passage be some *Yankee Notion* (cutting clear of all national jealousies), for the annexation of China?

Notwithstanding the strength and harmony of the machinery again was noticed, yet, as the cars descended, irrepressible fear prevailed, and I awoke. The storm continued; the sailors were still plying the ropes; my retching and vomiting renewed. I waited the return of sleep to see the details of the Mercantile and City Railroad, to learn the solution of the mystic flags in the Sixth Avenue, and the destiny of the subterraneans.

David P. Holton.

THIRTEENTH NIGHT.

THE ROPES (CONTINUED)

The sense of physical suffering and external danger being distanced by sleep, agreeable visions returned. The guardian angel, in robes like unto a cloud, was above the altar in the church of Caen-Stone. Through the folds of the involved and moving circles was read:

"Woe unto the world because of offences,"

And to illustrate the modes of intellectual and moral influences in, through, and upon man, again was presented the mystic play of circles within circles, developing forms modified in two orders: firstly, by a change in the primary impulse under similar circumstances of relation; and secondly, by similarity of impulse under different external relations. All was obedient to the will of the Great Author of the universe.

That this model of the works of Deity in the moral kingdom might not fail to be appreciated, reference was made to analogical acts in the vegetable growth, illustrating modifications of the second order; viz., similar cells, generated under the same cause, and impressed with the same laws of development, produce mature structures differing in form, consistence, color and other properties, according to the modifying external relations or influences. This was shown to be true in the *animal* as well as in the vegetable kingdom. The correlation of physical, intellectual, and moral influences was in like manner demonstrated to be so intimate, that the abnormal condition of one department rendered discordant the others.

It was no longer difficult to understand how one physical

error or transgression of law entrains physical evil on the individual, in the species, and even in neighboring species; and that in man this evil is not limited to the physical frame, but draws with it hurt to his soul.

It was no longer a mystery, that there was pronounced, "*Woe to that man by whom the offence cometh*," and that "It were better for him that a mill-stone were hanged about his neck and that he were drowned in the depth of the sea."

The scene changed. I stood in a cold damp basement at the "*Five Points*," in New York, whither I had been conducted by two children, whose famished bodies, clothed in rags, revealed the sad consequences of the intemperance of their parents, then wallowing in their pestiferous filth. My sympathies were fully enlisted in these pitiable objects, when I seemed transported to the scene of trial of those who furnished the intoxicating bowl, including the authorities sanctioning this evil, and those who, by their votes, had elected officers to license the creation of scenes like this, and as the judge held up to view their true position in this matter, and pronounced,

"*Woe to him by whom the offence cometh*,"

all responded, Amen.

Reflections upon the enormity of guilt and suffering produced by this great evil occupied some moments, when a star of hope arose.

The genius of temperance appeared, waving her banner, surrounded by legislators, who would not publish as law that which was transgression of right.

Following these were companies of youth; many of them from infancy had been the unhappy victims of the intemperance of their parents, now fortunately escaped from physical and moral offences of vitiated city poverty. This banner appeared like that I had recently seen at the pavilion dépôt, borne by youth, whom I now saw in procession on "Promenade Bluff," in the eastern part of Milwaukie. They soon

descended, by several flights of steps, from terrace to terrace, ornamented with beautiful trees, flowers, and statuary, and were seen about entering the Sailors' Chapel, on the quay. This chapel was a three story building, on land recently gained to the city from Lake Michigan, by erecting a wharf parallel with, and at about fifty rods distant from, the shore, and filling the included space of shallow water with dirt removed in excavations for the tunnel under the bluff plateau, through which passed the Mercantile and City Railroad, and with dirt furnished in depressing the grade of the water front of the north shore plateau.

The first story of this chapel was pierced with an arch, giving passage to the double track of said railroad; to the right of which was a reading-room, and to the left a cabinet of products of nature and art, in which the public schools took the leading interest. On the second floor was the residence of the chaplain. The third story was the chapel, where, in addition to the usual chapel services, was a weekly reunion of the teachers of Milwaukie for mutual aid, and for special encouragement to the children of the city schools, in naming and classifying minerals and plants which they may have collected for exchange, for donation to the school cabinet below, or for their private use, and brought to the chapel on their way to the baths. This reunion was appointed for the hour next preceding the time judged most convenient and proper for the youth of Milwaukie to enjoy this healthful exercise. The chaplain particularly delighted in discoursing upon the works of God to his juvenile auditors.

East of the chapel, and at the distance of the width of a street, was the quay dépôt of the Mercantile and City Railroad. This was an octagonal building, with glass roof. The doors of the west side opened to the cars direct from that portion of the city in the valley at Kilbourntown, through the tunnel under the plateau. The southern side gave exit to the cars over the land newly made, running near the water's edge on Mercantile Wharf to near the point where the river enters the lake. From that point, the railroad passed up the eastern bank of the Mil-

waukie river to the place of beginning. Near the junction of this river with the Menomonee, a branch crossed to the dépôt of the Milwaukie and Mississippi Railroad; thence along the base of the western plateau to the Kilbourntown dépôt aforesaid. From the Mississippi dépôt a branch crossed the Menomonee, to accommodate the Racine and Chicago dépôt, with an extension or branch for the citizens of Walker's Point; thus completing the double circuit on a plain nearly level with the octagonal dépôt.

The eastern doors were for branch tracks, extending on a wharf jetting east to deep water, for the accommodation of the Grand Haven and Milwaukie Steamboat Company, and passengers to and from the East.

The northern side opened for a branch to the land newly formed for the spacious lumber-yards, removed from the hazards of fire, where were planing machines, mortice and tenon machines, and several cabinet factories and flouring-mills, propelled by the stationary engine in the octagonal dépôt, or, as occasion required, by special engines placed nearer. Here, also, were store-houses for the celebrated Milwaukie brick, and power for transferring them to vessels. This wharf extended north to meet the main land on the north shore, where was the freight dépôt of a branch of the Lake Shore Railroad. This branch was on an inclined plane, and gravity served as the propelling force; the freight from the north being comparatively heavier than the returning cars.

In the northeastern portion of the octagon were the furnace and boilers for one, two, three, or more fires, as occasion should require. The northeastern side was continuous with a range of buildings jetting N.E., used as wash-houses, supplied with heat and motive power from this furnace.

The arrangements were ample for doing the washing and ironing for the whole city, at twelve cents per dozen for common pieces. Also, rooms with King's washing machines, and other apparatus, were furnished for washerwomen at very moderate charge by the hour. This, near its junction with the octagon, was pierced by an arch, to give a passage for carriages to and from the Grand Haven dépôt on East Wharf.

The southeastern side was continuous, with a double row of bath-houses along the sides of a wharf jetting S. E., and supplied with heat from the furnace in the octagon. Both the wash and the bath-houses, so positioned, could be extended directly east, as the increase of the city should demand enlargement. The price of a cold bath, or covered swimming-bath, was one cent; for a warm bath, two cents. Orphans, inmates of alms-houses, and persons specially named by the overseers of the poor, were furnished with gratuitous baths.

The northwestern portion was for the engine and for the ticket office and passengers on the outer track, on which the cars started for the tunnel; while the southwestern was for those on the inner track, starting south, to make the circuit in the opposite direction.

On the Grand Haven wharf, a few rods east of the octagon, was the gymnasium, a building sustained by three arches. Through the centre one, passed the rails for the Grand Haven dépôt, built at the end of the wharf. The northern arch was for the passage of carriages, and the southern for foot passengers, to and from the Grand Haven ferryboats. On the first floor was the gymnasium for males, and above was that for females. The lower gymnasium was joined by a foot-bridge to the northern tier of baths for gentlemen; and the upper gymnasium was joined by a covered foot-bridge over the former, and over the building of the first tier, and across the narrow wharf to the southern tier of baths for ladies. The Director of the gymnasium and the baths, occupied a wing projecting south, furnished with a library of books and periodicals devoted to these subjects, for the use of bathers. Here was a weekly re-union of physicians, teachers, and superintendents of public institutions, for a comparison of hygienic views in relation to bathing and gymnastic exercises, and other subjects, regarding public health. This body of counsellors had at all times the free use of the baths and of the gymnasium, and their practical conclusions were recorded in a book open to the public.

Joining the southern side of the Grand Haven wharf, and extending from the gymnasium to the octagon, was a three story building. The first and second stories were used for barbers'

shops; and the third story was the ladies' hair-dressing saloon, accessible only from the upper foot-bridge and from the ladies' gymnasium.

The charge to gentlemen was, for shaving, three cents, and for hair-cutting, five cents; and for ladies' hair-dressing, proportionably moderate. In each department was a box, in which parties who esteemed these prices too low, threw gifts, to constitute a fund for the use of the ladies' committees of the several wards, in their visitations among the sick poor of the city.

Indulging in a train of reflections upon the duty of a city to surround its individual members with physical, intellectual, and moral influences, for the entire good, I was aroused by the approach of the youth, who, having completed their weekly exercise in natural history, and their exchanges and donations of specimens, in the chapel, aided by the voluntary re-union of teachers and the chaplain, were proceeding to their baths. Then I understood the object of the youth, formerly entering the intra-terrene passage of the pavilion dépôt, of which the mystery was now solved. Then I joined a company of travellers from the east, in the rear cars of a train of six, on the outer circuit, which was soon moving west, drawn by the "motive rope," circulated by the force of the stationary steam-engine in the octagon.

The train entered the tunnel, and when arrived under the pavilion dépôt, and without arresting the main train, the two rear cars, by a change in attachments and in the direction of a short-hinged portion of the rails, were shifted upon a side track to the right. This change was effected by a bar previously fixed in the car next preceding the shifted ones acting on machinery, and the same agency put in motion, another apparatus for the simultaneous depression of the propelling rope in rear of the onward moving train.

Thus we were left at the bottom of the great well under the gigantic machinery of the pavilion dépôt. At the same time, on the tracks of the inner circuit, there approached from the west a train of an equal number of cars, two of which being directed on a side track to the south, remained stationary,

while the others passed on to deliver passengers for the Grand Haven steamboats, the octagonal dépôt, or to complete the circuit of the city.

Though far below the surface of the plateau, we enjoyed full daylight, by reason of the amplitude of this opening.

Soon these four cars were simultaneously elevated; and tourists from the majestic falls of St. Anthony, and the sublime cataract of Niagara, ascend the observatory tower; and passengers from Chicago, and places south, meet those from Green Bay upon the pavilion promenade; and passing into the rooms of the agricultural and horticultural societies, are entertained with an exposition of the experiments on the germination of seeds in soils of various compositions, different degrees of moisture, temperature, and light, and the growth of plants under circumstances equally varied.

In these examinations were seen some of the Minnesota and Iowa bound voyagers, while others were on the city experimental farm on the plateau, about three miles west, thus prolonging their visit in Milwaukie some four or five days.

Then, in my dream, I visited this farm, and saw many experiments in process of development, and in connection with the State Experimental Farm at Madison, and other corresponding associations, determining:

1. The choice of crops in rotation, or otherwise best adapted to the circumstances present, including soil, temperature, moisture, &c., requiring no artificial additions.

2. The exact combinations, additions, and ameliorations best fitted to any required crop.

3. The best rotation, in crops on given soils, and the quality and quantity of additions and manures to different soils best fitted to said rotation.

4. The best times and modes of planting, cultivating, and harvesting.

5. The solution of the problem of economy in the quality and quantity of food for different animals, the times of feeding, the degree and mode of housing them, and many other inquiries on animal life.

6. The problems of the dairy.

7. The best compositions and manipulations for enriching the soil.

8. The best implements of husbandry.

9. Modes of extending the science and love of farming.

10. Good store-houses for the harvests, and railroads to the market.

These developments had an increased value by reason of the ready communication between the city and the farm, inviting the visits of citizens and strangers. Beyond the experimental farm was the almshouse farm and three hospitals.

1. A charity hospital for the sick poor.

2. A hospital for the citizen without fixed home, and for the stranger, where the wealthy and those of moderate means might be comfortably attended during sickness at proper charges.

3. Beyond these was a third hospital, for small-pox patients, and those sick of other contagious diseases, under the double arrangement for charity and paying patients.

The western plateau between the Menomonee and the Milwaukie rivers, the eastern or bluff plateau between the Milwaukie and the lake, as well as the central and southern parts of the city, being each surrounded and traversed by a branch of the Mercantile and City Railroad, offered unprecedented conveniences to the citizens, who were conveyed to the pavilions, to the north shore, to any of the railroad dépôts, steamboat landings, markets, the experimental farm, city baths, and gymnasium, and other sections, at the moderate charge of two cents. Even this small charge was found to be a source of pecuniary aid to the city funds, thus harmonizing individual and public interests.

The solution of this problem was clear, on viewing the several stationary steam-engines, in sundry parts of the city, for safely propelling the cars, and examining the numerous establishments for the economical use of any surplus heat and power, and learning the many interests thereby harmonized.

The safety and convenience of this road were crowned by a

simple mechanism, acted on by the progressive movement of the cars, by which the motive-rope was depressed into a covered box at all the street crossings after the passage of a train, and elevated on its approach. Arrived within six rods of the crossing, the train caused the signals to be presented over the street and side-walks; and as the cars advanced, the cover of the box performed a semi-revolution on its hinges, when the rope arose to its general level till the cars should have crossed the street: then the onward movement of the cars changed the gearing of the apparatus, and the rope across the street was instantly depressed, the cover returned, the signals removed; and the carriages and passengers, having been momentarily arrested, resumed their wonted progress. Then was apparent the significance of the mystic flags in the Sixth Avenue, New York.

The safety and convenience of this railroad were doubly crowned by the simplicity of the attachments and detachments of the trains to and from the motive rope. In the front car was a cylinder, around which was a rope of some ten or twelve rods' length, having its free extremity armed with a clasp fitted to seize, with the least possible friction, the motive rope. When the train was fully ready to move, this clasp was applied; and as the cylinder revolved, "*giving rope*" freely, or rather, at a Cybelean price, it caused by its connections, at first, an impulse almost imperceptible, but progressively increasing to equal the velocity of the motive-rope. Then a new attachment was made under the front extremity of the car, and the cylinder-rope relaxed, the clasp yielded its hold, and slid back, as the rope was rewound about the cylinder, prepared for a similar series at the next stage.

The train, entire or in parts, could be instantly detached at any time from the motive-rope, and arrested by breaks, or shifted to side-tracks, as observed in the Pavilion Tunnel.

A change in the gearing connecting with the cylinder, enabled the conductor to make delivery of passengers at rest, or under moderate movement. Goods were delivered in like manner, and under quicker movement, according to quality of the package, and accompanying instruction.

This silent, unobtrusive railroad was divested of most all objectionable features in city practice; and the merchants whose stores reached the river's edge, esteemed the passage of this road through their rear basement a great advantage to their mercantile interests; not only by the ready access thus afforded to customers from all parts of the city, but chiefly in the reception and transmission of goods. Again, regarding the western plateau, I observed a continuous three story building, constructed of the beautiful Milwaukie brick, over the rail tracks, and elevated on pillars at a suitable height to offer no impediment to the cars. At the street-crossings the first and second stories were open space, the upper story only being continuous; and under it was the unobstructed passage. At some crossings in the densely populated parts of the city, nothing but the metallic roof extended over the street. Over the valley of the Menomonee, from the southern to the western plateau, and also over the valley of the Milwaukie, from the western to the eastern plateau, the railroad had over it simply the roof, forming with that of the continuous building a graceful ornament; a balustraded promenade roof, the common foot road, easily accessible at short stages.

The further purposes of this long series was not apparent, and while musing thereon, I heard the merry sounds of Milwaukie children with their guests, the youth of the Minnesota and Iowa bound passengers and citizens of all ages, who, having visited the experimental farm, and attended the lecture on *Rural Economy*, in the amphitheatre thereto attached, were now enjoying this majestic promenade, and whom I now joined. Some descended at the several spacious covered flights of steps, seeking their respective homes; others were going to "*Promenade Bluff*," thence to the city baths.

Of these parties I learned the details in full for the harmonization of many interests, not yet mentioned, the which being about to transcribe for imitation by other cities, I awoke.

Going on deck, I learned we were in latitude 38° north, and in longitude 57° west of London. Gale still increasing, with heavy cross seas.

David P. Holton.

FOURTEENTH NIGHT.

THE ARBOR.

The wind blew a gale from the north. Most of the sails having been previously furled, the sailors now took in the foresail and fore-topsail, and hove to under a close-reefed main-topsail; the ship lay up E. N. E., and fell off E. S. E. Thus drifting to and fro, and making no advance towards the desired shores of France, yet fifty-seven degrees distant, imagination took new flights in measuring the great deep, and the earnest inquiry arose, when will this mighty waste be passed?

Again sickness forcing me to my berth, I courted pleasant dreams. Soon the vine-clad hills of France were before me, and her delicious grapes were sweet to my palate, which so long had loathed every dish. Then was I in my own home in Twenty-sixth street, New York, recently left, with my wife and little ones, participating with them of the rich clusters, gathered from vines upon a trellised frame-work in the rear of the flower garden, which seemed to have been created in my absence.

In regarding further, a similar arrangement was seen to be the rear appendage of adjoining houses, midway between the blocks on the Twenty-sixth and Twenty-seventh streets, forming one continuous and beautiful arbor from Sixth to Seventh Avenues.

While the proprietorship was vested in the occupants severally, there seemed a community of purposes lovely to contemplate, an index of the tendencies of the rising republics in the western world for the union and harmony of individual and national interests.

The well-ordered family being the surest basis of democra-

tic government, true policy invites the study and practice of whatever increases the facility of sustaining the happiness and dignity of the family and home.

Then, in my dream, I seemed to be at the anniversary exercises of the Society for the Reformation of Juvenile Delinquents. Entering Mercer street church as the discourse was nearly concluded, I heard the speaker say, "Thus we have seen that temptations and dangers incident to great cities are upon the high and low; that riches and poverty are alike joined in crime, against which it is the duty and policy of government to provide. We have seen the grounds of labor among this latter class to be the more hopeful; because their prominent occasions point more clearly to a tangible, physical remedy."

Among the many hindrances to the good establishment of the family by those of small means, he enumerated the ill-adaptation of apartments for domestic arrangements, and the disadvantages under which the poor have usually been forced to make their small purchases, illustrating the text·

"The destruction of the poor is his poverty."

In this connection he mentioned, as one of the physical means immediately available for obviating these burdens, the multiplied and novel facilities offered by the new order of bake-houses, wash-houses, baths, markets, dwelling-houses, and many other items connected with the city railroad system.

These exercises concluded, returning homeward, I observed that from East River to the Hudson, midway between 12th and 13th streets, covering the rear and contiguous borders of the flower gardens attached to the houses thereon, was seen the beautiful arbor of vines, like that between 26th and 27th streets.

Arrived in Sixth Avenue, corner of 26th street, I saw, in the line of these arbors, suddenly present the five flags which aforetime had appeared enigmatical; but of which the purposes were now recognized to be similar to those used in Milwaukie.

All persons in the Avenue stopped; soon the upper half of

the protection box performed its semi-revolution, moving, with itself, in like manner, a short hinged portion of the track of the Sixth Avenue railroad, the motive rope rose to its level, a train of cars emerged from under the arbor, thus doubly useful; the train passed onward, the rope descended into its box, the cover returned, the track of the other railroad was restored, the flags retired from view, and 6th Avenue assumed its wonted scenes of activity.

On the east side of Sixth Avenue, midway between the 26th and 27th streets, an arch of moderate dimensions gave passage to the double tracks.

On the right of the arch was a saloon for passengers going towards Bellevue, and thence along East River to the Battery or Harlem; on the left was a saloon for passengers going towards the Hudson, thence through a western section to the southern or northern extremity of the island. Over this arch and these saloons was a four-story dwelling-house, the property of the city, rented to families. [The sequel showed many such in the city.] Adjoining this building on the east was the house for the station cars going either way, shifted from the main track to the right or left in the manner seen in the tunnel under the Pavilion Dépôt.

In one of these cars, thus left, I took seat as hazard passenger for some circuit unknown.

Our car was filled, door closed, all ready for attachment to a train on its arrival, or for single attachment to the motive rope, as convenience should dictate, and in the manner formerly observed in Milwaukie. According to which latter mode we were soon moving west across Sixth Avenue, through an arch, over which, and on each side of which, was a new dwelling-house, and entering the arbor first described, we found it to be a light structure, with iron roof, and sides of open-work, of the same material.

Arrived midway between two adjacent avenues, we entered an ample building, known as West 26th station, in the form of a Greek cross, having a stationary engine, with gearing to propel four separate motive ropes, similar to the rail-

road connections at the octagonal dépôt on the Milwaukie quays.

Following the destiny of my car, I was soon northward bound. At 27th, 28th, 29th, and all the other streets severally passed, the same series of presentations of flags, &c., above described, was successively witnessed, till we arrived at the station, West 42d, midway between 42d and 43d streets. Here we rested thirty seconds, during which time some cars of our train were changed to the East River motive rope, and others to the tracks directed westward. Thus far, except at the street crossings, we had been protected from the sun's rays by the arbor.

Progressing northward to Harlem, the arbor gave place to a substantial brick building, supported on arches and pillars, under which, in place of two, there were four tracks. The two central corresponded to the two under the arbor, and the two lateral tracks were for sub-station and for freight cars at rest for lading and unlading. On the way to Harlem, at sundry intervals, from a quarter to three-quarters of a mile separated, we found stations like those named West 26th and West 42d, and for similar branches at right-angles.

This continuous building was an immense store-house for the products of the country arriving by eastern, northern, western, and southern railroads, destined for the city use or for shipment.

Under this series were vast and numerous cellars, for winter as well as for summer use.

The fourth story was continued over all the cross streets from 42d street to Harlem River, and rented for offices, artists' studios, societies, schools, &c.; and a part of it was temporarily used for ropewalks, to supply the increasing demand for our railroad and shipping interest.

Over the whole was placed a promenade roof, safely balustraded, and accessible at frequent stages. The offices and other rooms on the fourth story, were accessible from the roof, through doors uniformly and tastefully arranged. The stationary engines propelling the cars, effected all the mechanical changes and transfers, as mentioned above, and also by another system of

apparatus, effected the lifting in the freight houses, and supplied the ropewalks with motive power.

The building was interrupted at the great central park, recently enclosed, graded, terraced, and traversed with avenues and alleys, winding among groves, fountains, and parterres, and renamed the "VISTA PARK."

Here, in place of the arbor or continuous building, the railroad passed in the centre of an extended green-house, surmounted by a highly ornamented promenade roof, in continuation with those north and south.

For the cultivation and sale of plants, seeds, and flowers, the basement, the first and second stories, were rented to florists, having uniform, lofty rooms of the height of two stories, projecting east and west, with roof and walls of glass. The third story was occupied by the American Institute, and contained models of furnaces, steam-engines, locomotives, bake-houses, iron-foundries, wash-houses, roofing, iron promenade roofs overlaid with asphaltum, apparatus for heating and lighting, turning-lathes, capstans, cranes, freight-arms, bridges, markets, stewards' dépôts, carpentry, pulleys, diving-bells, printing-presses, looms, spinning-machines, ropewalks, a collection of weights and measures of countries with which the great emporium is commercially connected, agricultural implements, astronomical instruments, &c.; also a library, on subjects connected with agriculture, arts, and trades.

The fourth story was occupied, one half by the Horticultural Society, and the other by the New York Lyceum of Natural History, rent free, on condition that they there open a perpetual exhibition, free to the public from sunrise till sunset, except on the Sabbath; a suitable police guard and other attendants being furnished by the city.

Each of these societies established a co-ordinate department, auxiliary to the Exchange Lyceum, reciprocating in products of nature and art with individuals, and with corresponding societies in all the States of the Union, and in remote parts of the earth.

Across the centre pierced a wide arch of height equal to the

building, over which was only the graceful promenade. This opening was made in order not to intercept the view presented by the "GRAND VISTA," from river to river.

On the right and left of this arch rose two pavilions, on square bases, of which one side exceeded the breadth of the main building, surmounted by towers.

The southern, with the omission of the light-house combination, corresponded in most respects to the southeast pavilion seen on Bluff Plateau, Milwaukie. For the details, in regard to the police telegraph, establishing instantaneous communication with all the watch-towers, the police stations, and other departments of the city government; for the large room for public lectures, for the mathematical, philosophical, and astronomical arrangements, and for the facilities of this watch-tower, the reader will please refer to the Observatory Pavilion on Bluff Plateau.

The northern pavilion was for the offices of the City and Mercantile Railroad, and the central office of the telegraphs specially devoted to the business of said road and freight-houses, markets, bake-houses, and other structures or dwellings, built in harmonious relation thereto. Here were records of every occupied and vacant apartment rented or to be rented by the city. For the convenience of all parties, the walls of these offices, in sectional order, exhibited plans of every room. The occupancy of any room, or section of a room, was indicated by the white ground of the plan. When any room or section of apartments ceased to be rented or used, it was immediately telegraphed to this central office; and by a very simple mechanism, the white was covered by a slide, painted some one of several colors of conventional significance respecting the adaptation of the room to specific purposes, its relation to motive power, &c.

Thus the citizen of small beginnings, the commission merchant, the importer, the country farmer, the manufacturer or mechanic, seeking lofts, cellars, or other apartments, temporarily, for their wares, all alike without questioning the agents, or taxing the kindness of officials, could learn from the "*rent*

plans" upon the walls what vacant rooms would best suit their purposes, preliminary to formal application at the desk.

The city authorities, impressed with the dictates of true policy, and cognizant of the fact, that "the destruction of the poor is his poverty," had established equitable rents; the man of small means taking a little apartment for a short time, paid in the same ratio as the merchant of more ample scope.

Arrived at the northern extremity of the island, I found improvements between the East and the Hudson rivers; so that the largest ships freely passed to and fro. Bordering this connecting arm of navigable waters, were immense store-houses, chiefly owned or rented by commission merchants and importers, whose places of business were in the commercial centre, near the other extremity of the city.

Here, also, as well as at the great promenade freight-houses, extending from Forty-second street to Harlem River (and sundry other places shown in the sequel), at moderate prices, the farmer, the produce broker, and the grocer, might deposit, temporarily, their goods; from which monopoly the good citizens of New York found nothing to fear.

Observing my car performing the evolutions symptomatic of departure, I resumed my seat. Passing to the great union dépôt at Harlem, many of my fellow-passengers left for the Northern and New England railroads. Thence our course along the East River presented to view corresponding facilities for ferry and other steamboat landings. Midway between Twenty-seventh and Twenty-sixth, my car turned westward. At the union dépôt of New Haven and city railroads, corner of the Fourth Avenue, the hazard passenger left his first car, pursuing its second round; many facilities having been observed not yet mentioned. Then I entered a train for the southern circuit; and passing eastward to Bellevue, thence along the borders of the East and Hudson rivers, I observed that the stationary engines were more frequent, and not only gave motive force to the ropes, as heretofore described, but, as at Milwaukie, effected the lading and unlading of vessels, and impelled branch

cars on the jetting wharves, to the great convenience of the shipping interest.

To each stationary power, placed near the junction of the main line of the quays with the wharf, jetting at right angles, was geared a revolving cylinder, extending right and left to the neighboring wharf.

This cylinder was contained in an iron box, permanently closed, a few inches below the surface of the street, and thus furnished motive power to the adjacent slips and their surrounding wharves. If on a fourth, or more distant slip or wharf, unsupplied motive power were needed, this was communicated by ropes contained in a concealed box, parallel with the cylinder, and prolonged as occasion should require. The power thus transmitted was used at will for the motive purposes on each wharf.

South and West streets were no longer encumbered with stages, carts, and 'long-shoremen; the hazards of this latter class having been exchanged for more permanent employments, growing out of the new order; and many had found honorable independence on the fertile farms of the great West.

Then in my dream was I with our Minnesota-bound voyagers, whom I accompanied from Milwaukie to the Mississippi; thence to St. Paul and St. Anthony's Falls; and leaving the Mississippi at Fort Snelling, we ascended the Minnesota to the fertile valley of the Mankato river. In all these places, the rapid flight and extended scope of a dream presented scenes of progress on a scale too vast, and novelties too sublime, to be reported on this occasion.

Passing south into Iowa, I found the other party of our western voyagers, who, leaving Milwaukie for Chicago, had passed the Mississippi on the wire suspension railroad bridge, at Keokuk, and ascended the Des Moines river to the rich regions neighboring to our Minnesotians, where, as it appeared in my dream, they had already been established some three or four years. Many, whom in New York I had seen struggling with overpowering difficulties, were here independent agriculturists; practising upon the scientific principles deduced from observa-

tion and experiment, and enjoying abundant harvests in return.

Iowa's rich prairies were easily cultivated, and her natural pastures afforded peculiar facilities for the rearing of cattle. Wool growing was one of the staple employments. The product of the vine here seen, brought to mind juvenile pictures representing the returning spies, laden with the rich clusters of Eschol.

Formerly this people had too well known the sad effects of intemperance to allow intoxicating drinks in their community; they were too well informed of the insidious beginnings of the fatal cup, to manufacture a tempting beverage, which the experience of revolving years has proved hazardous to personal safety and good order.

They cultivated the vine for what grapes they might desire to enjoy in their fresh state, and to preserve, in various ways, for use and for market; and in place of any surplus quantity of vines, they rejoiced in the harvest of luxuriant cereal and root crops, and all the fruits of temperate climates.

Flax and *hemp* of excellent quality were grown in great abundance, for which the demand in the eastern cities was said to have been recently much increased. Their merry harvest-song offered this joyous chorus:

> "The crowded city mocked our hopes,
> We 'long-shore boys in vain pulled ropes;
> Now, harvests rich, good air and health,
> With happy homes, compose our wealth."

This brought me, in my dream, to the arrangement of the ropes in connection with the mercantile and city railroad. At the steamboat landing, near the Battery, my luggage, labelled with the street and number of my residence, was without special oversight of owner, placed on a freight car belonging to railroad section No. 5, in which I resided, and at my convenience taking a passenger car, I was soon at home.

Some quarter of an hour after, the act of depositing the luggage on the platform under the vines of the rear arbor, caused

a movement of the wire attached to a bell within the house, which announced the arrival of my trunks, for which all charges were paid at the time of purchasing the passenger ticket to the city, at the steamboat office.

In case trunks or other luggage were found of unsuitable dimensions or weight for said platform, the conductor, in his discretion, would pass along with them to the next sub-station, station, or dépôt; thence the luggage or freight would be taken in express wagon to the residence or place directed. This platform was accessible through a door usually locked, thus preserving each residence private, as if no railroad were in the vicinity.

I found it was near the hour of breakfast; after which, I sought to test the facilities of the new railroad in the matter of marketing, of which I had heard much said. The market-box, size No. 2, having on it the name and residence, and also his registered number in the "*Arbor Market*," and enclosing a written list of the articles, or principal articles, to be purchased, was placed on the platform above-named, and in manner definitely prescribed; and near it was revolved the red flag, with figure 2 in white. The key of the market-box was retained at home, and a duplicate put into my pocket. Soon the market-car, under the velocity of the second degree, i. e., partially arrested, as heretofore explained, received the box by a mechanical freight arm, well adjusted for the purpose, of which a model had been seen in the rooms of the American Institute, at the "*Vista Park*." Having several friends to see on my way down town, and having been detained on my way by investigations of the details of the public baking establishments, utilizing the waste heat of several fires for stationary engines, some three hours passed before I reached the new market. Then I first visited the Stewards' dépôt—a three-story building, in the centre of the space, enclosed by a four-story rectangular structure, *the Arbor Market*. This Stewards' dépôt was octagonal, having eight distinct sections, each corresponding to one of the eight principal railroad circuits into which the city was divided. In this was arranged, in sectional, as they arrived by the differ-

ent cars, the family market-boxes, bearing the number, under which the owners were registered, with their name and residence. I went to section No. 5, being the section of my residence, and presented to the Keeper my key, having on it, legibly stamped, my registered number. Immediately he showed me my box. Then, leaving there my box and key, I made my purchases in the first and second stories of the surrounding rectangular market; and handing a card, about the size of a finger nail, containing my registered number and section, to each person of whom I bought, all, according to custom, carried the articles to my box at the section No. 5. Revisiting the dépôt, I relocked the market-box; and the same key enabled the Keeper or myself to revolve the attached index, marking the degree of care requisite in delivery on the arbor platform; and without farther trouble to the owner, the box was soon delivered at 61 West Twenty-sixth street, from the market-car, under motion of the second degree, as indicated by the Keeper to the Stewards' dépôt.

Again at liberty, I studied the details of the mechanism by which the several market cars, on their arrival, were discharged and elevated to the third story of the octagon, and then run on one of the four bridges leading to the third story of the surrounding rectangular market, there to remain till those in process of lading were despatched, when they were lowered in the octagon as occasion required. The charge for transporting both ways and delivering, under *moderate motion*, a market box of size No. 1, was one cent; for No. 2, two cents; for No. 3, three cents; for No. 4, four cents. For the same sizes delivered when the nature of the contents necessitated the delivery from the car at rest, as indicated in the estimation of owner or of the keeper at the Steward's dépôt, double the above prices were charged. All payments were to be made in advance, at the Steward's dépôt, to secure delivery on the arbor platform.

Many families entrusted their duplicate key to a friend at the market, or doing business near the market, who regularly called (at the time of doing his own marketing), at the proper

section, and opened the box, sent each day, and read the new order in the inclosed market-book, and made the purchases named. This friend, or agent, could often make a better selection regarding quality and price than could a stranger.

Housekeepers, having several errands to do abroad, could include the marketing without great inconvenience. Six or a dozen neighbors could alternate in their purchases, or they could employ some steward in common, who, having the duplicate keys, would go at a given hour to complete the purchases of all without confusion or delay. In all these cases full instructions were daily written in the market-book, in which, also, the steward made his daily report to each family, without any personal interview. In this same market-book were the small cards having the registered numbers used on the purchases as instruction to the seller for delivering the articles to the keeper at the steward's dépôt.

As all the markets in the city were equally in relation with all the railroad circuits, gentlemen, having a fancy to make their own purchases, had only to order the box of desired size to be sent in the morning to the market, which would be most convenient to their daily avocations or visits, and, retaining the duplicate keys, select their own time for marketing. Into the returning box they often placed other small parcels or packages procured during the day. All market boxes were necessarily of prescribed dimensions, and alike adapted to the freight arm, each furnished with index and registered number; and to avoid too high numbers, letters and other symbols were systematically combined with figures.

There were occasionally side tracks for freight, market, and bakers' cars, shifted like those described in the tunnel under pavilion dépôt; and for purposes seen in the promenade freight houses between 42d street and Harlem River.

And in many parts of the city circuits, instead of the arbor, were residences or offices like the continuous buildings seen on the plateaux of Milwaukie; all serving, in addition to what has been stated, as a necessary protection to the ropes against rain and snow.

All the ferry and steamboat landings, railroad dépôts, wharves, markets, post-office, and city store-houses, were united by circuits, fitly chosen throughout all parts of the city, over which the cars were mostly propelled by stationary engines; the surplus or waste heat being all utilized in mechanical works, public wash-houses, and baking establishments.

Individual circuits thus propelled, were in some cases united to each other by horse-power; and in particular parts of individual circuits, it was found expedient to substitute horse-power in place of the motive rope, as in case of the draw-bridges at Milwaukie.

Through these circuits was made, to and from the central post-office, the transmission of the boxes containing sectional or district letters, enabling the penny-post or letter-carrier, to remain constantly on his own territory.

The post-office arrangements were seen to combine safety, promptness, and facility; securing daily three distributions of letters.

The charge for a passenger from one to any other part of Manhattan Island, was only two cents; and yet the net profit from rents, freights, and passengers, added to the city treasury enough to support the schools of the city.

New facilities were discovered in this *harmonic* railroad, whose every cord beat responsive to human needs. The different circuits were united not only by the motive rope and horse-power; steamboats were often employed, as those joining Jersey City, Brooklyn, and Williamsburgh to New York. Moreover, from Brooklyn to Gowanus Heights, thence to East New York and Flushing, on territory previously unoccupied by dwellings, were four continuous tracks; two for freight delivery, and two for passengers, or freight cars in less interrupted motion; over which tracks cars were drawn by locomotives, impelled by force originating in a mode entirely different from anything yet mentioned, neither exposing neighboring buildings to the hazards of fire or inconvenience of smoke.

Over these extended, as in case of promenade railroads, wide

and high structures, for purposes of three orders, in regular and successive alternation :

1. Residences, combining every facility for families, offices, and artists' studios.

2. Manufactories, work shops, ropewalks, wash-houses, flouring mills, baking establishments, &c.

3. Freight houses for merchants, mechanics, brokers, and farmers.

Improving a moment, preparatory to an excursion on this circuit from Gowanus to East New York and Flushing, thence along East River to Astoria, Ravenswood, Green Point, Williamsburg, and Brooklyn, I examined the bakers' cars, which consisted of numerous, distinct, *air tight, caloric-retaining compartments, entirely surrounding a heater.*

The bake boxes, containing the articles from the baking establishments, for several families, in geographical order, were arranged in corresponding compartments, with a view to the least expenditure of heat, and to their easiest delivery.

There were three different methods of furnishing the heater with caloric, by either of which baked provisions could be transported in good state, and left at the exact hour ordered, on the arbor platform, or at the sub-stations, as in case of the market boxes.

Soon we were moving thus safely, silently, and commodiously. Increasing novelties chained my attention, and I saw more clearly than ever, that God wills his laws, physical, intellectual, and moral, *should be known and practised, and that conformity thereto constitutes a nation's strength.*

Approaching the village of Flushing, St. Thomas' Hall was in view.

Then, in my dream, did I visit the Rev. Wm. H. Gilder, in his professional labors, as educator of youth and expounder of the beautiful harmonies of Nature's laws.

At the close of his interesting exercise, presenting truth in its simplicity as the mental aliment of ingenuous youth, he invited me to participate in the refreshment of the physical frame.

Then was heard the ringing of the bell, which I thought to be from the arbor platform, announcing the arrival of the dinner, for which my appetite was fully set.

And I awoke.

Our sails were still furled. The wind was somewhat moderated; but the rain and dense fog required the constant ringing of the bell to advertize vessels which were known to be beating about in our vicinity, particularly the "Montezuma," bound for Liverpool, and the "Orphan" for Havre.

David P. Holton.

POSTCRIPT.

In the line of the Arbor Railroad had stood a church, adjoining which had been a building for a lecture-room and Sabbath school-rooms.

In order to give passage to said road, the church had been elevated. This change afforded ample room for the Sabbath school and lecture-room above ground, instead of occupying depressed basements, damp and sickly, too common in many places.

This arrangement left the ground formerly occupied for these collateral purposes free for the erection of a parsonage; the whole proving that the church, in its apparent sacrifice for the general good of the city, had found itself profited in the increase of its accommodations.

Of the system of *packing*, to avoid the usual noise of the passage of cars, it is not necessary here to report.

D. P. H.

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